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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/088,511	08/14/2002	Paul Harvey	P.19503/MAJR	4549

7590 12/13/2006

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EXAMINER	
RAO, G NAGESH	
ART UNIT	**PAPER NUMBER**
1722	

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/088,511	HARVEY ET AL.	
	Examiner	Art Unit	
	G. Nagesh Rao	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-12 and 14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *8-12 and 14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1 .1 14

1) A request for continued examination under 37 CFR 1 .1 14, including the fee set forth in 37 CFR 1 .17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1 .1 14, and the fee set forth in 37 CFR 1 .17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/17/06 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2) Claims 8-12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Downey et al. (US 5,762,891) in view of Krause et al.(US 5,820,966).

Downey et al. discloses the method of removing arsenic from an arsenic containing concentrate or ore. (see abstract) The concentrate can also contain useable metals such as Copper (see col. 8 lines 41-46). The arsenic is precipitated and removed as ferric arsenate. The conditions used are disclosed in col. 8 lines 1-5 as from 1.5 to 2.5 pH and temperature of 20-90 'C. The copper in the solution stays dissolved (col. 8 lines 40-50) and can be subject to further treatment to recover the copper. Col. 7 discloses the ratio of iron to arsenic be at least 2.5:1.

However Downey et al. does not specifically disclose the use of a series of continuously stirred tanks.

Krause et al. discloses the removal of arsenic from solutions. The arsenic

is precipitated as a stable ferric arsenate compound. Seeding occurs with recycled precipitate (ferric arsenate) seeds. (abstract) Fig. 1 suggests a series of stirred tanks open to the atmosphere. Table 2 of Krause et al. discloses the feed liquor to be treated as containing dissolved Cu. Neutralization occurs by addition of limestone (col. 3 lines 45-50).

It would have been obvious to one of ordinary skill in the art at the time of the present invention to combine the references because both detail removal of ferric arsenate compounds from a solution containing Cu and suggest recovery of the Cu. Motivation is given as the removal of the environmentally damaging arsenic and the potential recovery of valuable Cu metal.

In respect to claims 8-12 and 14, it would have been obvious to one having ordinary skill in the art at the time of the present invention to use the conditions of Downey et al. (which overlap those of the applicant) for the precipitation of arsenic from solutions containing Cu and a Fe:As ratio of preferably more than 2.5:1, while minimizing the copper lost from the solution in the process of Krause et al. including series of open continuously stirred tank reactors, pH and temperature adjustment, recycling and seeding, and using a calcium containing material (i.e. limestone) neutralization agent to selectively precipitate ferric arsenate compounds because Downey et al. discloses the conditions to selectively

precipitate ferric arsenate from solution and that the solution can be treated for the recovery of copper in a subsequent process.

Furthermore examiner would like to point out that incorporating the limitation of claim 13 into claim 8 does not overcome the prior art rejection because the mere disposition of maintaining the pH in the 3rd tank higher than the 2nd tank and saying that the pH of the 2nd tank be at least 1.9 would be obvious to one having ordinary skill in the art to determine via routine experimentation.

There is nothing precluding the combination of these two valid and analogous references from being combined and obtaining the same result as currently claimed by the applicant.

Response to Arguments

3) Applicant's arguments filed 11/17/06 have been fully considered but they are not persuasive. Examiner would like to point out that in attorney's remarks denote the deficiency of Downey 891 lacking the series of stirred tanks, which examiner already understood and thus combined with the teachings of Krause 966 to cure such deficiency.

Secondly examiner denotes that there is a pH range taught of 1.25 to 2.5 which covers said claimed ranges by applicant. Also noted was the removal of the

argument regarding no teaching of a calcium neutralizing agent in the second or third tank, thus implicitly understood as an admission of examiner's correct assertion.

Examiner noted the lack of argument put forth against the combination of the references taught, and therefore presumes it was a valid combination. Because the arguments are pertaining to the Downey reference and nothing really mentioned against the Krause reference thus a piecemeal argument.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Finally examiner has also noted that the arguments pertained to pH, temperature, and discussion of Cu concentrations especially their optimal condition parameters. However examiner also noted that none of these crucial pieces of information are either adequately claimed or even claimed in the claims themselves. Appplicant's submitted with the arguments a copy of Paul Harvey's confidential research paper as evidence to consider, but this was not properly submitted under 37 CFR 1.132 affidavit (See MPEP 716 for further details).

Examiner is highly suggesting that if applicant's filed this affidavit properly and addressing the claims and prior art in full form, that there would be more merit to consider PI Harvey's "BioCOP Product Neutralisation" document and how it may differ or present novel and unobvious means to traverse examiner's rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to G. Nagesh Rao whose telephone number is (571) 272-2946. The examiner can normally be reached on 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571)272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GNR

ROBERT KUNEMUND
PRIMARY EXAMINER